ODP 0-423
4 April 1980

MEMORANDUM FOR: STIC Secretariat

FROM: Bruce T. Johnson
Director of Data Processing

SUBJECT: Comments on Draft Paper on STAP Options
for SAFE

1. In its draft "STAP Options for SAFE" paper, the
Science and Technology Advisory Panel recommends an approach
to developing SAFE which was considered and rejected by top
Agency management in 1976. At that time it was felt that
a design competition and an architectural approach to a
system of this size was preferable to an incremental, pilot-
based approach. There were and are many who prefer the
STAP concept, but we must deal today with the fact that
a conscious decision was made to follow a different path,
and we have already invested four years and millions of
dollars creating the organizational and contractual basis
for an architected SAFE. The STAP paper does not, in our
view, adequately explain why a change is needed, nor does
it provide the Director with a concise statement of the
consequences of making such a change at this late date. Most
importantly, it ignores our commitment to our co-developers
in the project, DIA.

2. The merger of DIA's ADISS and SAFE, suggested by
Congress and directed by the DCI, was accomplished with the
understanding that DIA's needs would not be subordinated to
CIA's requirements. Completion of the then ongoing design
competition was delayed for almost a year while DIA's
requirements were accommodated by the competing designers,
and the winning design was selected in part because it was
perceived to be responsive to the identified needs of both
organizations. The proposed change in direction would elim-
inate from initial consideration the principal needs of the
DIA. These needs center on the accuracy, maintenance capa-
bility and general utility of their large encyclopedic files.
These files require restructuring and improved maintenance
capability as well as a high level of concurrency in use.
The proposed approach would of necessity center on the analyst

support functions which are of secondary importance to
the DIA. We do not see how DIA's priority requirements
can be met by reliance on such a CIA test-bed or pilot,
and believe that adoption of the STAP option would require
the dissolution of the joint project with DIA. The option
paper should address this issue, for it is a circumstance
in which the DCI can be expected to be deeply interested.
The change would be difficult to explain to DIA, which
would have to begin its development effort anew, after the
loss of about two years of discarded joint effort. The
change would also have to be explained to Congressional
overseers who took considerable interest in the original
decision to merge.

3.   There is no doubt that it is possible to find
advantages for CIA (and ultimately for DIA and the rest of
the community) in the pilot approach. We would not contend
that this approach is without merit; indeed, it was seriously
considered when the SAFE project was being launched. We
believe, however, that to develop a full scale SAFE system
it is essential to define the framework within which the
system will be developed. Pilot systems and experimentation
have had a role in this development, but it is not apparent
how one develops a full scale system from a pilot experiment
without such an overall framework.

4.   We in ODP have to be concerned about the many
references in the STAP paper to the need to strengthen SAFE
management. If our efforts have been found wanting, we
would be the first to want to know about it. We find it
difficult, however, to ascertain just where and how we are
failing, except that we are carrying out a management decision
the wisdom of which the STAP now calls into question. We
have several echelons of oversight to which we try to be
responsive, and we at one time had provided for an advisory
group like the Advisory Council on Technology suggested by
the STAP. We have been growing increasingly aware of the
need for such a body and would welcome its establishment, but
would urge that it be advisory to the line managers of SAFE
and to the SAFE Steering Committee, and not be given managerial
authorities which would confuse and complicate an already
complex, two-agency command line.

5.   We accept the concept of expanded research into
the ways in which computer interaction may change the
analytical processes, but would urge that this be done in

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parallel with a continuing development of the basic computer tools envisioned in the original SAFE concept. We believe that through the efforts of NFAC a great deal is known about the needs and behavior of the users. The DIA has supplied users as a part of the project staff with many points of contact for Community update and user requirements. We agree that this definition of analyst's needs is a continuing effort as long as there is a SAFE. A great deal of the still-continuing work of OCR/SAS has been in this vein and it should be augmented as suggested.

6.   We have no disagreement, either, about the inevitability of changes in the system and we are committed to ensuring that the tools built for us by [   ] are sufficiently flexible and adaptable to meet changing needs. There can be no argument with the assertion that we do not know everything we could know about the future. We would contend, however, that even after two more years of study there will still be many unknowns. At some point we have to have the courage of our convictions and start to build something. We are continuing to define a minimum set of capabilities for IOC to ensure that a useful expanded system is developed which can grow to accommodate the full set of changing and emerging needs. This problem of definition is exacerbated by the difficulty in finding deferrable functions. The cooperation of the user community is good, but there are honest mixed motivations.

7.   The community involvement outlined in the paper constitutes a major redefinition of SAFE. We believe the community interests should be addressed as outlined in our memorandum to the DCI. Initial investigative work could be initiated at any point, but definition of additional capabilities should be deferred until the IOC of CIA SAFE. The overall community needs are not at this time defined, and this separate effort would involve setting community standards and collecting from each agency its specific needs for SAFE-like functions. The element in CIA SAFE most readily shareable with the community is the large Recon data base with its index documentary resources. As you know, we have under review in the IHC a CIA proposal to make this data base available to the community, perhaps through COINS. It is perhaps illustrative of the difficulty of dealing with "community" services that the IHC has spent over a year studying our proposal and no decision has yet been reached on whether this existing index should be adopted for community use.

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8.   I hope it is clear from the foregoing that we
can support much of what the STAP is suggesting, though
as noted, we are concerned about their apparent lack of
confidence in our management of the project. Suggestions
for steps we can take to improve will be welcome. Our
real problems with the paper stem from the STAP's rejection
of the management decision which has dictated the course
of SAFE development to date and from our perception that
to adopt their option would require us to abandon the
commitment to develop SAFE jointly with DIA.

                                    /s/ Bruce T. Johnson

                                    Bruce T. Johnson

cc: DDA
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4 APR 1980

ODP # 10-422

MEMORANDUM FOR: STIC Secretariat

FROM   : Clarus W. Rice
                  Director of Central Reference

SUBJECT   : Comments on Draft Paper on STAP Options for SAFE

1.   It is difficult to comment in depth on all of the concepts in the STAP options for SAFE paper within the two days allowed for review. The observations that follow are based on a quick review of a paper that proposes a major directional change in SAFE system design. OCR's problems with the paper are (a) the recommendations to expand SAFE at this time to the entire Community, (b) the recommendations to delay SAFE for the purpose of gathering additional user data through a pilot system created from Interim SAFE, and (c) the lack of any demonstrated proof that the new approach is superior to the current one.

Community SAFE

2.   STAP has characterized SAFE as "a large and intimidating R&D effort." We believe that expansion of the current design beyond CIA and DIA to include the Community at this time would compound this R&D challenge and jeopardize eventual success of the system, not only for those two agencies but eventually for the Community. The paper as written does not make a strong case for Community involvement now except to note that strengthening of Community management of SAFE is essential "if it is to become effective in satisfying prescribed functions," and that a direct COINS link "will enable study and experimentation by analysts in Community-wide access and retrieval." Further, pointing out a need for an ADP-Communications Community manager and the need for SAFE to be integrated into an overall Community architecture do not belong in a SAFE options paper. It may be desirable to have a Community ADP-Communications manager, but that is an entirely separate issue. It is unrealistic to criticize SAFE for not being part of an overall Community architecture when no such architecture exists. Judging from past experiences, it would take at least another five to seven years to design such an architecture. NFAC analysts can't wait that long for a SAFE system to assist them in improving intelligence analysis and production.

SUBJECT: Comments on Draft Paper on STAP Options for SAFE

3. We believe that the current development approach will provide the base for a future Community system. Our experience to date with DIA requirements indicate that many are already being met by the requirements previously established by CIA. Since SAFE involves basic general purpose analytical tools, it is our opinion that a major SAFE re-design would not be required to expand the system to the Community. The Community needs will be met with the current approach.

A True Pilot SAFE

4. The recommendations for a pilot system consisting of an improved Interim SAFE fail to take into account the long history of how CIA SAFE requirements were originally generated and how they have been refined, verified, and amended over the past six years. It is true that in a true "engineering" sense the Interim SAFE system is not a true operational model of the final system, but Interim SAFE itself evolved from an initial pilot system that was designed to determine if analysts could use on-line computer services to support their day-to-day operations. NFAC analysts became so enthused about the Interim System that they convinced the DCI and other senior Agency management of the need for SAFE (an interesting human factors experience for management not mentioned by STAP). NFAC analysts also convinced management to retain and expand the Interim System until full SAFE could be developed. The basic requirements for SAFE, at least as far as NFAC analysts are concerned, have been verified and expanded by surveys, workshops, direct analytical contacts, an extensive SAFE user network, testing and evaluation of SAFE concepts in a SAFE test lab, and extensive customer/ contractor interaction. DIA SAFE requirements have been "folded" into CIA SAFE's requirements and DIA is participating in tests in the SAFE test lab.

5. We do not take issue with the STAP statement that modifications to SAFE will become manifest with "the transition of naive users to experienced ones," and that new requirements will emerge from experienced usage. We have already seen evidence of this in NFAC's use of Interim SAFE. Flexibility in function and performance is a basic requirement in the SAFE design and is being monitored by ODP's CSPO. Such changes will occur even under the new pilot SAFE proposed by STAP. Change is inherent in any ADP system once users become acquainted with its power and begin clamoring for changes. In the past 13 years the OCR AEGIS system first built in 1967 has undergone massive changes to adapt to user satisfaction and dissatisfaction.

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6.   The STAP options paper also overlooks:

(a) The impact on NFAC analysts who have been told that a SAFE that they requested and participated in defining over the past six years is no longer valid. It is difficult to see how their enthusiasm is going to be "built up" for another series of pilot experimentations and data gathering;

STATINTL

(b) The impact on the current SAFE development organization within OCR, ODP and ☐ which is just beginning to "jell;"

(c) The impact on future funding from OMB and Congress not only for an "expanded" Interim but also for a much larger and expensive Community SAFE somewhere in the future;

(d) DIA involvement and funding to date in the Project and its long term plans within DoD involving SAFE;

(e) The critical requirement of making SAFE functions available to a suitable number of NFAC analysts in the near term;

(f) The proposal that CIA made over a year ago to the Community for on-line access to its current RECON data base. This will provide Community experience sooner than the proposed pilot. The RECON data base is the equivalent to the central public file within the SAFE system. It is this large central file that would be the major Community resource.

STATINTL

7.   In our opinion, the STAP option to change SAFE strategies is extremely unwise. The option does not offer a solution that will not also contain many of the problems that we now face in the current SAFE system design and a new pilot system will most likely surface more requirements but not all the requirements that experienced users generate against a system once it is fully operational. Any major revision of the existing ☐ contract will waste large amounts of the funding already expended. Finally, the approach recommended by STAP was much like the original development plan for SAFE, but it was discarded by senior Agency managers in favor of the current approach.

Clarus W. Rice

STATINTL

SUBJECT: Comments on Draft Paper on STAP Options for SAFE

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D R A F T

4 April 1980

The proposed change in direction would eliminate from
initial consideration the principal needs of the DIA. These
needs center on the accuracy, maintenance capability and
general utility of their large encyclopedic files. These
files require restructuring and improved maintenance capa-
bility as well as a high level of concurrency in use. The
proposed approach would of necessity center on the analyst
support functions which are of importance but secondary
priority for the DIA. Under the proposed approach then,
DIA should pursue its own course in improvement of its
large file capacity and decide later whether to participate
in the analyst support functions developed as proposed.

4 April 1980

COMMENTS ON STAFF OPTIONS PAPER

The following points address specific elements raised
in this paper.

1.   Community Involvement - The community involvement out-
lined in the paper constitutes a redefinition of SAFE. We
believe the community interests should be addressed as
outlined in our memorandum to the DCI. Initial investigative
work could be initiated at any point, but definition of
additional capabilities should be deferred until the IOC
of CIA SAFE. The overall community needs are not at this
time defined, and this separate effort would involve setting
community standards and collecting from each Agency its
specific needs for SAFE-like functions.

2.   Staff/Line - The paper seems to intermix line management
and staff functions and responsibilities. It is not clear
whether it is proposed to augment, replace or support the line
organization on the SAFE project. In particular, the ACT
seems to have responsibilities in each of these areas and
includes a   audit responsibility for all aspects of
the project.

ILLEGIB

3.   Management - We endorse the use of advisory panels of
the general nature outlined. These should, however, be used

at the direction of the project management, but providing
reports which would be available to the Steering Committee
and line management within both Agencies. (Such a panel was
included in the initial SAFE program in 1975 but was abandoned
when SAFE funding was not forthcoming.) Deputies as outlined
are certainly welcome. These functions are somewhat accommo-
dated by having users, technicians and representatives of the
Agencies as a part of the project staff. SAS fulfills a part
of this role for CIA. We agree that the methodology and
human factors studies should proceed parallel with the develop-
ment effort. A great deal of the work done by SAS has been in
this vein and should be continued and augmented.

4. —Knowledge of User –

    o   We believe that through the efforts of NFAC a great
        deal is known about the needs and behavior of the
        users. The DIA has supplied users as a part of
        the project staff with many points of contact for
        community update and user requirements. We agree
        that this definition of analysis, is a continuing ILLEGIB
        effort as long as there is a SAFE.

    o   Interim SAFE can be expanded but significant
        expansion is a substantial effort. This was the
        subject of a 1978 study currently being reviewed.

    o   We are aware of outside systems which do some of
        the things which users wish to do. We do not know

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of any which have a significant portion of what

SAFE requires on the scale necessary. We do anti-

cipate that if these exist they would be proposed

to ☐

5.   How to Specify SAFE - We believe that to develop a
full scale SAFE system it is essential to define the frame-
work within which the system will be developed. Pilot systems
and experimentation have had a role in this development, but
it is not apparent how one develops a full scale system from
a pilot experiment without such an overall framework.

In summary, we support the following:
a)   The use of a technical advisory panel to work in support
of the project.
b)   The additional assignment of deputies having specific
background as outlined.
c)   Intensified methodology and human factors work in support
of the design effort.
d)   Additional extension of Interim SAFE if the funds can be
procured.
We are continuing to define a minimum set of capabilities for
IOC to ensure that a useful expanded system is developed which
can grow to accommodate the full set of changing and emerging
needs. This problem of definition is exacerbated by the
difficulty in finding deferrable functions. The cooperation

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of the user community is good, but there are honest mixed
motivations.